APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,697	01/12/2001	Robert H. Halstead, JR.	09612.1028-01000	2648

			EXAMINER
22852	7590	06/27/2005	ZHEN, WEI Y

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ART UNIT	PAPER NUMBER
2191	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/759,697	HALSTEAD, ET AL.
	Examiner	Art Unit	
	Wei Y. Zhen	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 March 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/30/2005</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   This office action is in response to the amendment filed on 3/30/2005.

2.   Claims 1-28 are pending.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter. As per claim 28, the claim recites a computer data signal comprises

a code segments which not being tangibly embodied in a manner so as to be executable.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10, 13-22, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McLennan, Michael J., Object-oriented Programming with [incr Tcl] Building Mega-Widgets

with [incr Tk]" (Art of Record (AV), hereinafter McLennan in view of Owens et al., US Patent

No. US 6,047,284 (hereinafter Owens), and further in view of Hostetter et al., "Curl: A Gentle

Slope Language for the Web," World Wide Web Journal, Spring, 1997, art of record, hereinafter

Hostetter.).

As Per Claim 1, McLennan discloses a method of processing data comprising:

defining a class (E.g. see page 86, Figure 2-11 Fileview mega-widget and associated text) which supports an option data structure (E.g. see page 87, lines 24-30, "usual" option-handling code for scrobars) having, in instances of the class, references to option values (E.g. see page 87, lines 25-26, options -background, -troughcolor), the option data structure including a type description of the option values; (E.g. see page 76, Figure 2-4 and page 86 - 87, Example 2-1 and associated text); using the type description in the option data structure to process an operation on the option value in an instance of the class (E.g. see page 76, Figure 2-4, page 79, Figure 2-6 and associated text).

Mclaennan does not explicitly disclose without preallocation of memory for full option values.

However, Owens in an analogous art teaches "without preallocation of memory for full option values". (E.g. see col. 3:1-17, which states "...allocating storage space for the object without storage space for an array element if the instantiation request does not specify an initial value for any of the data members of the array element . . ."). Therefore, it would have been obvious to incorporate the teaching of Owens into the teaching of McLennan to include without preallocation of memory for full option values. The modification would have been obvious because one of ordinary skill in the art would have been motivated so that the allocation of storage for array elements may be deferred until necessary.

The combination of McLennan and Owens does not explicitly disclose using the type description is performed *during compilation*.

However, Hostetter teaches in a manner using the type description is performed *during compilation.* (for example, see Page 1, Lines 22-29, which states ". . . Curl expressions, class definitions and procedure definitions embedded in the web document are securely compiled to native code by the built-in on-the-fly compiler and then executed without the need for any sort of interpreter. Curl provides many of the features of a modern object- oriented programming language: multiple inheritance, extensible syntax, a strong type system that includes a dynamic "any" type, safe execution through encapsulation of user code and extensive checking performed both at compile and run time. . . ." and see page 7, lines 11-12, "Lexically-scoped environment. Curl provides a structured name space whose bindings include variables, constants, types, and compilation hooks for arbitrary syntactic forms."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hostetter into the system of McLennan, Owens to have the using of the type description being performed *during compilation.* The modification would have been obvious because one of ordinary skill in the art would have been motivated to use Curl modem object-oriented programming feature (object structure) to compile to native code and execute without the need for any sort of interpreter.

As Per Claim 2, the rejection of claim 1 is incorporated respectively and further McLennan discloses the option data structure identifies change handler code that is executed when an option value changes. (E.g. see page 81, Figure 2-8 and associated text, e.g. page 81, lines 1-3).

As Per Claim 3, the rejection of claim 2 is incorporated and further McLennan discloses "change handler code for one option is defined in different classes within a class inheritance

hierarchy and the change handler code from each class is executed when the option value

changes." (E.g. see page 81, Figure 2-8 and associated text, e.g. page 81, lines 4-13).

As Per Claim 4, the rejection of claim 1 is incorporated and further McLennan discloses

"the option data structure includes a default value (E.g. see page 83, lines 12-16), the method

further comprising, in a get operation to an instance of the class, if an option value which applies

to the instance has been set, getting the set option value and, if no value which applies has been

set, getting the default value for the class." (E.g. see page 79, lines 3-9).

As Per Claim 5, the rejection of claim 1 is incorporated and further the combination of

McLennan, Owens discloses "defining a first class with a first option data structure of a first

form which supports, in instances of the class, references to option values without preallocation

of memory space for the full option values" (Mclennan, E.g. see page 75, Figure 2-3 and

associated text, e-g. Spinint class; Owens, E.g. see col. 3:1-17). "defining a second class with a

second option data structure of a second form which supports, in instances of the second class,

references to option values without preallocation of memory space for the full option values, the

second form being different from the first form" (E.g. see page 75, Figure 2-3 and associated

text, e.g. itk::Widget base class Owens, E.g. see col. 3:1-17) and "during compilation, encoding

an option operation as a method call to an object of the first class and to an object of the second

class without regard to the form of the option data structure supported by the class." (Mclennan,

E.g. see page 75, Figure 2-3 and page 76, Figure 2-4 and associated text; Owens, E.g. see col.

3:1-17; Hostetter, for example, see Page 1, Lines 22-29).

see previous office action for rejection to claim 6-7.

As Per Claim 8, the rejection of claim 1 is incorporated and further McLennan do not

explicitly disclose a nonlocal option value applies to other objects in a nonlocal option hierarchy.

However, Hostetter teaches a nonlocal option value applies to other objects in a nonlocal option

hierarchy. (E.g. see Section3, Page 4, Lines 1-2). Color is a nonlocal option because all text in a

given document is usually the same color. Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate the teaching of

Hostetter into the system of McLennan to comprise a nonlocal option value applies to other

objects in a nonlocal option hierarchy. The modification would have been obvious because one

of ordinary skill in the art would have been motivated to implement properties in a dynamically

bound environment using a deep binding mechanism.

As Per Claim 9, the rejection of claim 8 is incorporated and further McLennan do not

explicitly disclose the nonlocal option hierarchy is a graphical hierarchy. However, Hostetter

teaches "the nonlocal option hierarchy is a graphical hierarchy." (E.g. see Section3, Page 4, Lines

1-2 and Section4.3, Page 9, Lines 34-35). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate the teaching of

Hostetter into the system of McLennan to comprise the nonlocal option hierarchy is a graphical

hierarchy. The modification would have been obvious because one of ordinary skill in the art

would have been motivated to represent a graphic image as a hierarchical tree of Graphic objects

(Leaves of the tree are primitive Graphic objects which know how to draw themselves, usually

after looking up the values of various properties).

As Per Claim 10, the rejection of claim 1 is incorporated respectively and further

McLennan discloses : "the class which supports the option data structure includes defined fields

to support values in preallocated memory space." (Again, see as noted above of Claim 1).

See previous rejection to claims 13-22, 25-28.

5.   Claims 11-12, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McLennan, Michael J., Object-oriented Programming with [incr Tcl] Building Mega-Widgets

with [incr Tk]" (Art of Record (AV), hereinafter McLennan in view of TK Library Procedure,

"TK-configure Widget Manual Page" (art of record (AR2), hereinafter TKLib), further in view of

Owens et al., US Patent No. US 6,047,284 (hereinafter Owens), and further in view of Hostetter

et al., "Curl: A Gentle Slope Language for the Web," World Wide Web Journal, Spring, 1997, art

of record, hereinafter Hostetter.).

As Per Claim 11, the rejection of claim 1 is incorporated and further TKLib discloses :

"the type description is used to check the declared type of a value to be set in a set operation."

(E.g. see TKlib, page 4, line 14 to page 6, line 31).   It would have been obvious to incorporate

TkLib into McLennan because one would want to utilize the type description for verification.

As Per Claim 12, the rejection of claim 1 is incorporated and further the combination of

Tklib discloses : "the type description is used to check the legality of an operation to be

performed on a value obtained in a get operation." (E.g. see TKLib, page 4, line 14 to page 6,

line 31).   It would have been obvious to incorporate TkLib into McLennan because one would

want to utilize the type description for verification.

Claims 23-24 are rejected for the reason set forth in the rejection of claims 23-24.

Response to Arguments

6.   Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei Y. Zhen whose telephone number is (571) 272-3708. The examiner can normally be reached on Monday-Friday, 8 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wei Zhen
6/21/2005

WEI Y. ZHEN
PRIMARY EXAMINER